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PATENT APPLICATION
Docket No.:   OSA96-01

HAND-DELIVERED

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Clifford Heath, Graeme Port, Steven Klos, and
                   Graeme Greenhill   RECEIVED

                                                       2755 (2316) NOV 18 1997

Serial No.:   08/707,622   Group: ~~2307~~
                                                       Rosenholm GROUP 2300

Filed: September 5, 1996   Examiner: ~~Unknown~~

For: SYSTEMS AND METHODS FOR AUTOMATIC APPLICATION
                   VERSION UPGRADING AND MAINTENANCE

PETITION TO MAKE SPECIAL

Assistant Commissioner
    of Patents
Washington, D.C.   20231

Sir:
     This is a petition to make the above application special as
permitted under 37 CFR 102(d). Authorization to charge Attorney
Deposit Account 08-0380 for the petition fee of $130 as set forth
in 37 CFR 1.17(i) is hereby authorized. One duplicate copy of
this Petition is enclosed.

     Applicant believes that all claims are directed to a single
invention. However, if the Patent Office determines that all the
claims presented are not obviously directed to a single
invention, Applicant elects Claim 1 without traverse.

A first pre-examination search of issued U.S. patents and
published articles had been conducted prior to filing the
application. The references deemed most closely related to the
subject matter were submitted in the IDS filed on March 18, 1997.
As no decision had yet been made to file a Petition to Make
Special, the search strategy was not saved. Therefore we have
conducted a second search using the Patent Office's and IBM's on-
line (Web-based) patent search engines. In addition, we
utilized NERAC, a data base search service. As a result of this
second search, one additional reference has been found (the
Stupek patent) and a supplemental IDS is being filed accordingly.

Our search strategy included terms such as "software" in
combination with variations of "upgrade", "update", and "version
management", as well as "network" and "internet". We also
searched class 395, subclasses 619, 703, and 712.

We now present a discussion of the present application and
the references.

The present invention teaches a method of updating
components of an application program on a client by maintaining
the components and a catalog identifying the component versions
on a server. At a time determined by certain parameters, the
client requests the catalog from the server over a network such
as the Internet. The server responds by downloading the catalog
to the client which compares the version information against its
currently installed versions of the components. Components which
do not match the corresponding version identification in the
catalog are updated by having the client request the needed
components from the server and having the server respond by
distributing the requested components to the client. With this
invention, current components are maintained on the client

without unnecessary downloading of components which are
unchanged.

In the present invention, all processing is performed on the
client system, with the server doing nothing more than responding
to industry-standard file transfer requests. This allows any of
the more than 20 million Web servers to be used for application
distribution and updating. The methods of the prior art
discussed below require processing to be performed on the server,
and most require cooperative processing on both client and
server, which is more complex to implement and manage. Thus, the
present invention is far easier to implement and far less prone
to error than previous methods.

U.S. Patent No. 4,714,992 (Gladney et al.) teaches a system
for managing versions of "data objects" in a distributed system.
The data objects are maintained in a "source location", which
distributes them upon request to "replica locations", or clients.
The source location apparently maintains a list of replica
locations (Table USERIDS listed in Table 1, Col. 5 lines 65-68),
and a list (table BADMESSAGES) of obsolete messages or data
objects for each replica location. Col. 13 lines 7-12. Thus for
every replica location/client, the source location is required to
do the housekeeping work and determine what versions of an object
a particular client should have. This would be unwieldy for use
on the Internet, where there may be tens of thousands of clients.
In addition, whereas Gladney manages data objects, the present
invention's purpose is to manage software component versions.
The present invention does not need to maintain separate entries
for each client; instead, it maintains a catalog of current and
obsolete components and downloads the catalog to a client so that
the client itself can decide what is needed.

U.S. Patent No. 5,005,122 (Griffin et al.) teaches a system
of software distribution over a network using master and slave
software distribution servers in conjunction with a management
server, but does not teach a method of component version control.

U.S. Patent No. 5,008,814 (Mathur) teaches a method in which
system software is updated in distributed nodes (clients) and
tested. Nodes having failures are restored to the prior version.
This is particularly important with system software, as a
computer will not operate correctly without valid system software
and ordinarily might not be able to correct itself. The Mathur
patent deals with this issue. Distribution from a source node to
distribution nodes is initiated by a "distribution command"
entered by an operator at an operator node. Col. 5, lines 1-6.
The present invention, on the other hand, deals with software
component version management and distribution. Distribution is
automatic and initiated by a client upon certain conditions.

U.S. Patent No. 5,019,963 (Alderson et al.) teaches a method
in which a local processor (e.g. a PC) contacts a host and
provides information to the host as to what computer program and
data files it is about to use. The host determines what the
latest levels should be, possibly for that particular local
processor, and downloads them to the local processor if
necessary. (Col. 2 lines 18-39). In Alderson, the host queries
the local processor as to what the local processor has, and the
local processor responds to the host, identifying what type of
workstation it is and what is installed. Col. 4 lines 34-44. By
contrast, with the present invention, the client determines the
need for new versions.

U.S. Patent No. 5,155,847 (Kirouac et al.) teaches a method
and apparatus in which a client contacts a host (central system).
Unlike the present invention, however, the host requests version

information from the client, which supplies the information, and the host decides what software patches to send to the client. Col 10 lines 50-62.

U.S. Patent No. 5,247,683 (Holmes et al.) teaches a method of installing and building software using configuration build files. While the build may be over a network, this patent does not disclose a means of version management.

U.S. Patent No. 5,448,727 (Annevelink) teaches a method of optimizing object-oriented databases and is not on point.

U.S. Patent No. 5,495,610 (Shing et al.) teaches a software distribution system for building and distributing software releases. Determination of what nodes (clients) need to be updated is done centrally (Col. 22 line 29 - Col 23 line 36) and not by the nodes individually as is done in the present application.

U.S. Patent No. 5,555,416 (Owens et al.) teaches a method of installing software. Installation may be remote, but Owens does not teach version control.

U.S. Patent No. 5,581,764 (Fitzgerald et al.) teaches a system of software updating in which lists (schema) of software are generated for each node listing which software should be on a particular node (the "should have" or SH list). The SH list is compared with an "already have" (AH) and the result is a "need" list. This is different from the present invention in which a catalog is maintained in a server and requested by a client.

U.S. Patent No. 5,586,304 (Stupek et al.) discloses a method of upgrading computer systems but does not disclose the catalog downloading method of the present invention.

The Kirtland article, "Safe Web Surfing with the Internet Component Download Service", discloses the Internet Component Download service which is apparently software used in downloading applications via the World Wide Web (the Web). However, this system does not appear to provide for a centrally held catalog which is downloaded to individual clients upon request.

In summary, none of the above patents or articles disclose the method of the present invention in which a catalog is downloaded to clients, and clients determine whether new versions should be requested. Furthermore, we have offered an election without traverse should the Examiner determine that the claims are not directed to a single invention. We therefore ask that this Petition to Make Special the present application be granted.

Respectfully submitted,

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Date: 11/17/97